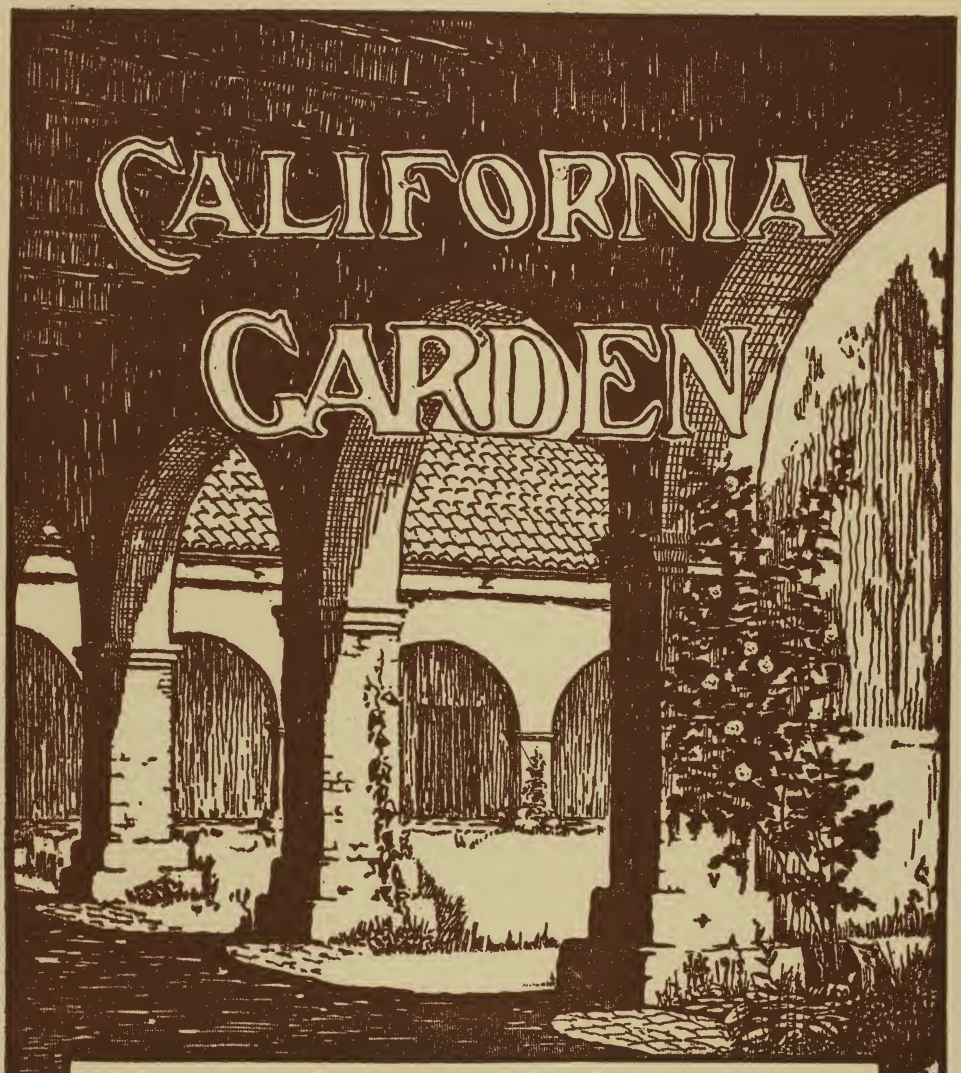
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CALIFORNIA GARDEN



IN THIS NUMBER

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By Jacolyn Manning

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TULE BALSAS AND BAMSHIBU

By Ruth R. Nelson

How few people standing today upon the Presidio Hills, which overlook San Diego Bay and the promontory of Point Loma, can visualize that scene divorced from its social, commercial and harbor developments and the activities of the navy, so well represented there from time to time, by every known class of fighting ship and aircraft? Yet, during the past, intervals of from sixty to one hundred and sixty years have intervened between the arrival of ships in San Diego Bay. And there is no clear reckoning of the time during which the **balsas** (tule raft-like canoes) of the Indians were the only man-made water craft which traversed those waters which were always peacefully quiet except during the calving season of the gray whales. As many as fifteen of these have been known to pause during their annual journey southward and make their way in past Ballast Point, announcing their presence in the bay with many spoutings, and no doubt proving an effectual blockade for such light craft as the tule canoes of the natives. The whales passed south from December to February, and returned north during March and April. Hence, when the Spanish ship San Antonio, arriving in San Diego Bay on April 11, 1769, was mistaken by the Indians for a whale with a big white goose upon its back, they were simply counting their calendar.

The **balsa** was a raft-like affair fashioned out of bundles of tules fastened together into a hammock shape, with a point at each end, and providing the most primitive known means of navigation found among any people. However, according to the letters of Father Serra himself, the Indians went far out to sea upon these light rafts during their "Month of Fishing" (June-July), when even the inland tribes came to the coast to remain until the shoals of fish had again left the vicinity. The deep sea fishing was accomplished by a skillful use of fish spears made with movable bone heads, and attached to a long line, so that, when the fish was struck, the barb loosened, and the line was paid out until the fish was exhausted and could be drawn in. Fish lines (according to Holder, who saw such articles upon the Island of St. Nicholas) were made of kelp vines soaked in grease to make them pliable, and then dried in a cool place. By a skillful fastening several long lines strong enough to catch very large fish could thus be quickly fashioned. Small sardines were used for bait.

Two passengers could ride upon a **balsa,** which was always partly submerged, and the feet of the riders hanging down in the water on eithe rside of the craft, served as paddles. One writer declares that the waters of San Diego bay formerly "teemed" with these tule canoes, and we wonder what may have occurred when a **balsa** crossed the pathway of the sportive porpoises which also frequented the bay. These strange sea creatures were reverenced by the early peoples, who believed them to be the "guardians of the world."

Using their **balsas,** one very dark night during the first months of Father Serra's missionary camp at San Diego, the Indians paddled out and raided the San Carlos, sister ship of the San Antonio which had been sent back to Mexico for additional men and more provisions. The chief object of this thieving expedition was to obtain more of the coveted cloth of the white men, and they cut up the sails of the vessel to satisfy this desire.

It would only prove tedious to name and describe the different sedges which furnished useful materials for the original Californians. Let it suffice that the Indians themselves, having examined each variety, chose to use certain tules in fashioning numbers of articles for which they had constant need, one of the most important of these being the coiled watertight baskets which they used for so many purposes.

However, some of the other uses of the tule are not so well remembered. Dr. Bard tells us that the ashes of burned tules were used as a cure for rheumatism, and that the Indians also had a method of extracting sugar

from a certain reed of the tulares. They used arrows made with a main shaft of cane two feet three inches long, and a foreshaft of greasewood nine inches long. These pieces were glued together with pitch and bound with sinew. They were tipped with three hawk feathers slightly twisted to give the arrow a rotary motion and make it carry straighter. Such an arrow would travel three hundred yards.

Tules twined together and smeared with asphaltum were used as splints. Indian skeletons give evidence that many fractures were so nicely adjusted that no deformity resulted. The tender, white sprouts of the tule were gathered in great quantities for food. There is constant reference to tule mats and tule huts in the stories of the early days. Eldridge tells us that the first missionary hut on the old Presidio hill was thatched with tules, and the necessity of later providing the Missions with roofs which the Indians could not set afire, led to the making of the now famous tiles which are still to be seen covering some of these old adobe structures.

The natives used nets cleverly made of tules for trapping water fowl. After cutting channels amongst the rushes which grew in places frequented by the birds, these nets were spread in such a way that the birds could easily swim underneath them when they were decoyed or else gently driven into the channels. At a signal all the hunters made a great noise, the fowls rose to fly away, and were entangled in the meshes of the net and became easy prey.

Another method was to select a spot about two feet deep where there was clear water, fasten the net midway between the surface and the bottom, and strew the place with berries. When the fowls dove for the berries their heads became entangled, and each victim thus served as a further decoy, because it could neither escape nor make any sound whatever.

But the use of the sedges in basket-making gave the tule an important place in the lives of the Indian women. Humboldt wrote that the Indians presented the Spaniards "with vases curiously wrought of stalks of rushes and covered within with a very thin layer of asphaltum that renders them impenetrable to water." Lumps of the material are said to have been put into the basket with hot stones and shaken with a rotary motion to distribute it. The basketry of the Coahuilla Indians, the Dieguenos and Luisenos (the southern Indians) was of the one California type, namely coiled basketry. But the sewing of these Mission baskets was done with materials which varied according to locality, it was sometimes done with splints and sometimes with bullrush. Formerly the only implement used in making these baskets was a bone awl for making holes to accommodate the stitches. The bullrush used was Juncus lesnerii or Juncus robustus, scapes and leaves of which are two to four feet high, stout and pungent. Near the base this reed is of a deep red, lightening in color upward, passing through several shades of light brown, and ending at the top in a brownish yellow. A supply of these is gathered by the basket maker and cut into suitable lengths, then with hands and teeth the scape is carefully split into the desired portions.

Juncus acutus was the reed used by the Coahuilla Indians of the Colorado Desert for their coiled baskets and bowls. This material was gathered in the marsh at Palm Springs, immersed for several days in muddy waters of the spring to make it flexible, and then dyed black by steeping the desired number of strands, for several hours, in a decoction of sea blite (dondia suffrutescens) as identified by Jepson.

With respect to variety in basketry there is no more interesting group of Indians in America than the Pomo women who not only understand many processes common among other tribes, but have introduced several peculiar to themselves. Carl Purdy and J. W. Hudson have classified thirteen different varieties done by them, seven classes of twined basketry, and six classes of coiled basketry.

Bamshibu is one of their coiled work methods, and indicates that the basket is made upon a three-rod foundation. By the Pomos this is regarded as the highest type of their basket work. Its materials require the most careful tests of evenness, pliability, and color. The valleys which were formerly inhabited by the Pomos alone, (now Mendocino and Lake Counties), teemed with wild grasses and the streams were hedged with carex (sedge) and willow. But this has now been changed by the advent of alfalfa and hops, and many ranchers forbid the Indians to dig on their lands. So the materials for the Pomo baskets of today can not be so well selected. Of the twelve animal and twelve vegetable materials used by the Pomos, the first on their list are the two sedges, Ka-hum (Carex barbarae) and Tsuwish (Carex, black-rooted sedge).

Of the sedge Ka-hum they used only the root, preparing it in the following manner for their coiled basketry sewing. During the summer and early autumn they gathered the root stocks carefully, as these furnished the splints for the creamy groundwork of most Pomo baskets. They dug these roots with hands and feet, aided with the use of clam shells and sticks. One end of the rootstock was grasped with the toes, the clam shell was used to scrape back the soil, and the sticks loosened the

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ground and pried out any stones. By this method a woman could secure fifteen or twenty strands a day. These were placed in water overnight to preserve the flexibility and soften the scaly bark which they scraped off in the morning by first chewing the end to separate the bark, then holding one end between the teeth, and the other between her toes, the basket maker scraped away the outer bark and disclosed the tough white, or tan-colored, strand about half the original thickness of the root. These strands were kept in small coils until the next process is to be started, when the strip was thoroughly soaked in warm water and split into strands for the sewing. Beginning at one end the root is divided through the center, by means of fingernails, into three parts. Each of these sections is then carefully split into three finer parts, and this process is continued until the strands are the size which the basket maker wishes to use. The value of a basket depends in a measure upon the fineness of the threads and the evenness of their preparation, as well as the workmanship and pattern of the basket itself. These threads are the sewing material of the baskets, and in the method called **Bamshibu** this sewing is done over a foundation coil formed by holding three pliant stems together, instead of making the coil over a single strand. Bamshibu results in a much more elastic basket and a stronger one. The three selected stems must always be chosen with the greatest care, their combined cross-section must always be as nearly circular as possible to maintain the uniform thickness of the basket. After the wrapping of the minute circle which forms the basis of the basket, the coils must be continued with the plan of the basket always in mind. Its symmetry must be maintained without any guiding framework, and the design remembered and worked in with the black strands of the Tsu-wish. Months, and sometimes years were required to complete a first-class Pomo basket, some of which have been made of strands so fine that the sewing shows sixty stitches to the inch.

For dyeing the splints for the intense black which was required for their patterns, the Pomos applied the fresh juice of the poison oak, or buried the splints with charcoal, ashes and earth for eighty hours.

The Indians of Southern California made use of pottery utensils which they made of clay with a framework of reeds. After covering this frame with the wet clay they baked the pottery for two days, then took it out of its oven and put dry grass and sticks inside the jar and set these afire to burn out the framework and also harden the clay on the inside. While the jar was still hot it was immersed in water, thus cooling it and giving it color and hardness. After drying in the sun these jars were so hard that they were almost impossible to break.

For the description of the uses of the sedges in basket work we are indebted to the Report of the National Museum, 1902, which contains 500 pages of authoritative information upon Indian basketry, as well as 250 full page colored plates and nearly 1000 text-illustrations. The **Bamshibu** occupied only a small place in this imposing collection, yet it was declared to be the finest and best of them all.

Historically, the Indians of California have left behind them no traditions of great leadership. The Mission regime furthered their entire loss of individuality. Yet in one of their necessary arts they have excelled all other primitive peoples, and their basketry remains to this day, unequaled by any other tribe or nation.

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THE GARDEN POOL

Your pet Goldfish are now in spawning season and it is good policy to keep them well fed. The parents will produce stronger spawn and, secondly, if they are filled up so they can scarcely hold more they are not quite so greedy to eat their eggs. But notice we use the word **quite** advisedly because if there is one thing a fish likes better than fish eggs, it is more eggs. It is always supposed to be a risk to transfer eggs to a different water on account of a probable difference in temperature, but we tried an experiment last week with very little hope of good results, and discovered something. While visiting a friend we noticed the fish spawning and lifted them (on Hyacinth roots) wrapped them in moist paper and enclosed in air tight bag to bring home. They were out of water about two hours, placed in a receptacle which woud float in my pool and in three days they hatched. Fish are much like our friends, that is they occasionally surprise us.

Bertha M. Thomas.

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NATIVES

By K. O. Sessions

A driving trip to Campo on the 29th of May, via the Jamul and Potrero roads, was particularly interesting when large patches of the Matilija poppy, Romneya Coulteri, came into view on the east side of the road sloping upward to the adjacent foothills. I had never seen it growing in such large patches before and it proved to be the type that is known as the one growing in the Otay Valley. The buds are rounded and rough with short, stiff hairs; the flowers are not over 4 to 6 inches at best, and very crinkly and crepe-like; the foliage not very robust and rather slender; the flower stems from 4 to 8 feet or more in height, depending upon the soil and moisture. This poppy in the Santa Ana Valley and Canyon around Corona and Riverside, has a coarser foliage, smooth and pointed buds, and flowers about the same size—4 to 6 inches in diameter—and the petals decidedly smooth.

This poppy was first found and then described in the Matilija Valley of Ventura County, its type like the first described. The name Matilija is Indian. A seedling that I have in cultivation has pointed and smooth buds, very robust foliage, leaves twice as large as the two previously mentioned varieties, and the flowers always 6 to 8 inches and sometimes reach 9 and 10 inches in diameter—a very robust sort in every way.

This plant requires loose and well-drained soil; will not succeed on adobe or heavy clay soil. When established, it makes many underground roots and sends up shoots several feet away. These shoots do not become established and independent until one to two years old. The plant should be cut back to one foot each fall, by late October or first of November. Dug then, even with bare roots, it generally survives. It can also be grown from root cuttings in small pots but requires one to one and a half years before it is well rooted.

Every garden in Southern California should have a clump in some corner as it is one of our very finest native plants of Southern California, and in the British Isles is a highly prized plant.

The Dendromecon rigidum, or yellow shrub poppy was also noted in a few places on the Potrero grade. It is also a very desirable plant but even harder to propagate than the Matilija poppy. Its distribution in the state is very interesting — conspicuous in the Santa Cruz Mountains on their western slopes facing the ocean; appearing again in the Del Mar and Torrey Pines sections in this County, and again on the branch road to Laguna Mountains in a few places; and a very few were noted on the Potrero grade. It is evergreen and practically everblooming.

The beautiful large red flowering pea — Pride of California—Lathyrus splendens, was quite conspicuous near the end of the Potrero road as we neared Campo, and was also seen in the foothills around Campo. It has a perennial root and stem and can be trained up and its main stem remains, while the side branches die back. It might be called a miniature wistaria. This plant deserves greater cultivation in many places. It is propagated by seed.

Along our coast highways the choice shrubs and trees indigenous to such locations should be planted, as they would require the least care and would be of great interest to all visitors, those from Northern California as well as from the great part of the United States to the eastward. The following are a few such shrubs:

Ceanothus arborea—practically a small tree, light blue.

Ceanothus integerrimus, a good shrub, dark blue.

Ceanothus verucosa, a fine compact shrub, white, and a January bloomer.

Dendromecon rigidum, yellow flowering shrub and an ever-bloomer.

Rhus integrifolia, a robust evergreen shrub.

Lyonothamnus floribunda a beautiful shrub, native of the Santa Cruz Island, opposite Santa Barbara.

Prunus ilicifolia, our native wild cherry.

Prunus integrifolia, wild cherry native of Catalina Island.

Heteromeles arbutifolia, our native Christmas berry.

SOIL OR DIET?

By Paul C. Hahn, Jr.

On my visits through the different gardens in Southern California I have often wondered why people do not use more consideration as to the quality and texture of the soil they use. They will go to any amount of trouble in keeping their plants clean and well arranged and otherwise cared for, yet will use anything from adobe to beach sand instead of a good rich soil.

I have found through personal experience the most practical, all-around soil should consist of approximately one-third peat or leaf mold, one-third clean, sharp, coarse sand, and one-third rich garden loam. This soil will never pack hard. It retains considerable moisture so that watering is required less frequently. It also tends to allow the plant a good strong root system. It is adaptable to all varieties of

cacti and other succulents, or any plant or shrub with the exception of roses, and similar plants which should have a trifle clay or adobe, which may be added to this mixture.

A good way to test your present soil is to see if you can press your forefinger into the soil to the second joint when fairly dry. If you can't, your soil is too stiff. I would suggest that you make an experiment and try this soil on a few potted plants and note the difference.

OUR NATIVE WILD FLOWERS

By Fidella G. Woodcock

A page of the Desert Garden for May is devoted to the work of Dr. William Trelease of the University of Illinois on agaves, yuccas, and nolina all endemic in the San Diego area, especially in that part of it near Salton Sea ranging from Ysidro mountains southeastward through Borego Valley and the Narrows that is a part of the desert region.

While Dr. Trelease was first director of the Missouri Botanical Garden, his most important work was done in succulents, a remarkably complete collection for the time, being done while animals were the principal means of transportation. Varieties of agaves, yuccas, and nolinas were described but since the day of motor cars has succeeded slower vehicles, many new species or variations have come to light.

The agaves of the Colorado Desert according to Dr. Walter T. Swingle have been reclassified all as agave deserti whether growing in clumps as in the uplands or individual plants most commonly found on the desert floor, dripping with honey from the overflowing nectaries. These agaves once an economic product of primitive people are now the luxury of stock ranges and plains of arid desert soil throughout the Great Southwest, they are to be known as the "California agaves," a plant of the Amaryllis family, used in Mexico for making maguey, that is called mescal, the national drink of Mexico.

In California, praise to the state, it is used for a different purpose, not fermented at all but eaten as preserves by the various tribes as is other canned fruit, or eaten as cooked food baked in hot stoves in a syrup of its own making.

At the annual flower show, April 8, 9, 10, Mr. Lawrence M. Huey showed the complete set of yuccas that are in our range. Yucca Mohavensis with thready fibre, yucca Whipplei, Our Lord's Candle, pure white flowers and long narrow leaves, prominent in the mountains growing sometives very tall and slender. Its friendly neighbor, the purplish flowered yucca graminifolia with longer grass-like leaves is recorded among plants as being the Mexican form of Yucca, Whipplei, that is practically the same thing varying from surroundings, the type locality being Sonora. While our pure white yucca is known only in the California coast mountains.

Yucca treoifolia, the Joshua Tree, is a native of the Mohave Desert. The disagreeable odor of the plant renders it undesirable in private grounds. It has a smell like soft soap while boiling and does not endure standing in water. Yucca baccata, the berried yucca, or "Wile Date" has fruit eight inches in length and is found in the E. Mohave Desert to Mexico.

This species is commonly known as "Spanish Bayonet" through the deserts of United States and northern Mexico. Nolina is not near in. It is with yucca and Dasyl liliacous, and the group ranges near San Diego. These species as a basis with the associate group of annuals and desert mountain shrubbery made a splendid showing for our range. With these rare species as a fundamental what can we not expect of the future? Take care of them.

JUNE WEATHER IN SAN DIEGO COUNTY

Dean Blake, Meteorologist

Temperatures continue their upward march in June in San Diego County, and summer conditions obtain after the middle of the month. Little or no rainfall occurs, and only once in 82 years has an amount greater than half an inch been recorded in the city. Only one day may be expected with measurable rainfall.

Considerable cloudiness prevails during the night and the early morning hours west of the mountains, but in the higher elevations clear, mild weather holds. The month frequently passes with each day clear and with a monthly sunshine total of 100 per cent back from the coastal regions. In the city and along the coast the average amount of sunshine is 62 per cent.

Occasionally, when there is an area of high barometric pressure over the Plateau regions and a low area to the southwest of us, warm, dry weather covers all of Southern California, and at this time temperatures above 90 degrees occur along the coast and over 100 degrees are reported from the valleys between the littoral and mountain districts.

However, as a rule, one day is much like another. The average maximum temperature is 69 degrees; the average minimum 59 degrees, and the change from one day to the next small. In fact less change is usually experienced in the weather from day to day than in any of the other months.

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The California Garden

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Silas B. Osborn
Associate Editor
Walter S. Merrill

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ANNUAL MEETING

The annual meeting of San Diego Floral Association will be held Tuesday evening, June 21, at 7:30 sharp. A short business meeting with reports of officers for the year will be followed by the speaker of the evening, Mr. A. B. Clayton, who will talk of the flora of desert, valley and mountain of San Diego County, illustrated by direct color photography by aid of lantern and screen. Every member should avail themselves of the opportunity to see the beauty of our County in natural color.

Refreshments and social hour following the lecture.

New members and subscribers for June:

Mrs. J. Edwards, Morgan Hill, Calif.
Miss Marie Bosworth, Berkeley, Calif.
Mrs. H. Seymour Darlington, La Jolla, Calif.
Mrs. Mildred Sieler, Decotur, Ill.

SUMMER LECTURE COURSE INNOVATION AT ROSECROFT

The practical minded home gardeners of Southern California will avail themselves of the opportunity offered by the "Summer Lecture Course" at Rosecroft Begonia Gardens of Point Loma, California, to learn at first hand the culture of the begonia family and kindred plants. These lectures delivered by the genial and talented master of Rosecroft, Alfred D. Robinson, in the world's most favored environment of the subject matter inaugurates a new step forward in the progress of ornamental gardening in California's Southland. Those who are not particularly addicted to lath house gardening will reap great benefit from the fundamental principles of gardening in Southern California that are brought out in the discussions of the culture of plants of any description. Mr. Robinson has one of the keenest minds on horticultural subjects of any one that the editor has ever heard or read. Those who have read his writings for the past twenty years in the "California Garden" know him for his spontaneity and originality of expression. His talks sparkle with the humor so characteristic of him.

Horticultural lectures of value are not uncommon in Southern California and many writers of ability on this subject regale us with the theory and practice of gardening through numerous periodicals, yet nowhere to our knowledge has such an opportunity as now presents itself been offered to the public. The privilege of hearing an outstanding authority on a garden subject explain and demonstrate in detail the theory and practice of successful culture. It will require no strain of the imagination to bring about a thorough understanding of the subject matter. The following subjects will be presented:

June 15—The Begonia Family.
June 29—Fibrous Begonias.
July 13—Tuberous Begonias.
July 27—Rex Begonias.
Aug. 10—Plants Complementary to the Begonias.

The Rosecroft Begonia Gardens are located at 530 Silvergate Avenue, Point Loma, Calif.

"LATHED GARDENS—WHY, HOW AND WHERE"

Such, was the subject of Alfred D. Robinson's lecture, delivered on the afternoon of June first. The lecture was held in the "Family Garden," a charming portion of Rosecroft's extent, adjoining the recently completed study.

This was the first of a series of Lathed Garden lectures to be given by Mr. Robinson. In this first, fine discourse, the progressive stages of Rosecroft's lathed development was most interestingly presented. In his own humorous, yet convincing manner, he allowed his listeners to enter with him, into his memories of experiences during the past thirty years as a garden specialist on Point Loma. He declared the infancy of even the present beautifully expressed lathed garden, speculating upon the possibilities of such in the years to come. And he still hopefully endeavors to impress upon plant lovers his conception of the real meaning of the home sheltered garden.

With illustrations on every side, it was easy and delightful to follow Mr. Robinson's trend of thought. Hundreds of blooming, seedling French hydrangeas formed a bank of beauty on one side, while giant fuchsias, of many varieties peered over their shoulders or nestled nearby. Oldtime flowers have become new and more lovely as grown beneath the lathed protection of Rosecroft.

We cannot but express the conviction that it was indeed a rare privilege to attend this first gathering, and it is good to know that further opportunities are to be offered. In what other beautiful garden spot in this country, may one absorb so much loveliness, combined with sound, easy to comprehend garden advice? We are sure that Mr. Robinson's second lecture, to be delivered June 15th, will be attended by the general public as well as all lathed garden enthusiasts in these parts. The subject is to be, "The Begonia Family."

Constance D. Bower.

THE MAY MEETING

The San Diego Floral Association met May 17th at the Floral Building with Mrs. Greer presiding. Mr. Fred H. Wylie was introduced as the speaker of the evening who gave a splendid talk illustrated with slides of rock gardens and pools, showing the pictures of many beautiful gardens he has designed and constructed in and around San Diego, also the new addition to the garden of the Church of the New Jerusalem at the corner of Campus and Tyler which members were privileged to visit this spring. The new garden being the South African desert garden, planted with succulents native of Cape Town vicinity. He also showed the pleasing rock garden and pool on the roof of the home of Commander Fry, the new Mayor of Coronado. Very impressive were the pictures of nature's rock gardens and pools in Mission Valley Canyon and Sentenac Canyon at the foot of Banner grade and Mr. Wylie advised all to study nature's plan carefully in designing their rock gardens and pools. Using careful thought in the selection of rock and in its placing to imitate nature, as well as in the plants and vines. Large hand tinted photos lined the walls of the room of different rock gardens and pools which were greatly admired by all.

Miss Sessions spoke of the progress of the succulent and cactus garden in the Park, also giving names and describing flowering plants and shrubs brought in for decoration. Mr. Jerabek told of his trip to the desert last Sunday via Banner grade and into Sentenac Canyon and bringing with him a large bouquet of desert flowers and shrubs in bloom at this season.

Mary E. Ward.

CONCRETE MULCH TRIED ON GOVERNMENT PLOTS

Back-yard gardens ultimately may be paved instead of plowed.

The United States Department of Agriculture is now experimenting with permanent mulches of concrete, iron, cinders, zinc, aluminum, and other substances, which cover the surface of the ground, except for a small space where the plants grow.

The experiments an outgrowth of the successful paper-mulch investigations of recent years, are as yet in their infancy, and the department makes no predictions as to their final value. In the tests beans, peas, strawberries, and various other small fruits have grown as well under the permanent mulch as with ordinary cultivation.

Blocks a few inches thick and 9 and 12 inches wide cover the ground, with rows 1½ inches wide between them. The permanent mulch conserves moisture and controls weeds. In addition it warms the soil earlier in the season and keeps it warm longer in the fall. Rainfall gets into the ground along the rows between the blocks. The cinder blocks are covered with asphalt to make them black and absorb more heat, and other materials are painted black.

Soil covered with the blocks since 1928 have continued productive. Government scientists believe it possible that no ill-effects will be found, because they know that trees grow successfully under city streets and sidewalks, which constitute a "permanent mulch."

The Japanese, in certain parts of their country, grow strawberries by using field stones and cement blocks on the ground between the plants, but these are on mountain sides and are placed on a slant. The chief purpose is to force the plants for the midwinter market, and the system has been in use for several years.

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CALIFORNIA'S WILD FLOWERS ABROAD

The name of the Viscountess Byng of Vimy is well known in horticultural circles throughout the world and especially in Europe. She is a world-wide collector and her garden in Essex contains treasures from every land. During Viscount Byng's residence as Governor-General of Canada, Lady Byng made her first personal collectings of American plants. Having the freedom of the railroads she was able to pull the cord to stop her train and back it up whenever she passed a plant treasure. With a helper and collecting paraphernalia she took many expeditions on those little hand cars on which one casts covetous eyes as they rollick over the ties.

Some time ago we planned a trip together, for although Lady Byng has many California wild flowers growing in her garden she had never seen them in their native habitat. When this spring she made her first visit to California and our plans materialized, I took her down into San Diego County before showing her any other parts of the state.

More than anything else I wanted her to see the flowering plants of Astragalus coccineus and Lathyrus splendens. She had never known the former and from her description I felt sure that she was growing Lathyrus strictus under the name of L. splendens. Those who know the gorgeous beauty of these two San Diego County flowers can imagine her enthusiasm at sight of them and especially of the true Lathyrus species, growing up through new red twigs of Rhus laurina.

Like most keen English gardeners, Lady Byng was more familiar with our wild flowers than the average Californian is. She was delighted to discover them growing in their natural state and to gather from actual observation further data about their culture. She was especially interested in Frasera albomarginata (Swertia albomarginata), Ceanothus austromontanus, Nama demissum and Monoptilon bellioides.

We carried with us moist sphagnum moss and packing equipment, and when a plant was taken it was immediately wrapped up and sent by air mail straightway to England, accompanied by detailed instructions to the gardeners. I should not be surprised if every plant lives and as each comes into flower it will be exhibited at Chelsea or whichever flower show its time of bloom approximates.

If all collectors showed this appreciative care of our wild flowers, more of them would be found flourishing in our gardens. And when agriculture, subdivisions, grazing cattle and foreign forage plants have driven our native flora to its last stand, it could still be enjoyed within the bounds of our own estates.

Lester Rowntree,
Carmel California.

PASADENA CACTUS SHOW

By Jacolyn Manning, M. D.

The Fourth Annual Exhibit of the Cactus and Succulent Society of America was held May 12th to 14th in the exhibition hall of the new Civic Auditorium in Pasadena. There was a large attendance of members, gardeners, and scientists from up and down the Coast.

The most decorative garden plant exhibited and the sensation of the show was the **Puya alpestris** with its large peacock-blue flowers. The plant, not unlike a yucca in growth and form of blooming stalk, is perfectly hardy, for its native home is along the snow-line in the Chilean Andes. **Puya alpestris** was discovered by a missionary in Chile, who saw the hills near his garden radiantly blue in its blooming season, and forwarded seed to E. O. Orpet, ex-superintendent of Parks at Santa Barbara, California. The magnificent specimen shown was six years from seed and had been grown in the open. When the first of the three-inch flowers bloomed a peacock happened to pose on a nearby fence, and the colors of petals and feathers were indistinguishable. The showy stamens are a deep orange, the unopened buds jade green tinged with madder. There is no foliage on the seven foot flower stalk, but hundreds of buds whose serial floriation exceeds in brilliance that of **Strelitzia regina.**

The Sweepstakes Cup went to the Soldeno Gardens of Altadena, won by their exhibit of 450 specimen plants of all the loveliest Sedums, Echeverias, Crassulas, Mesembs, etc., etc.

The prize for the rarest cactus in the show was awarded to a rather insignificant appearing cluster of spines from Southern Brazil, known as **Malacocarpus ottonis.** The rarest cactus shown was undoubtedly the very beautiful specimen of **Lophocereus schotti monstrosus,** collected by Howard Gates in central Baja California. It was ruled out, as only typical plants may compete for this honor, and not their so-called monstrous forms, however beautiful. Howard Gates, the noted explorer and collector of desert flora, exhibited two twenty-foot tables of rare cacti, several of them new species from Baja California, as well as a skeleton trunk of **Idria columnaris,** the picturesque "telephone pole" of that little known 1000-mile long garden of exotics.

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Magnificent columnar cacti, including **Cephalocereus senilis**—("old man"), and **Pachycereus marginatus**—("pipe organ cactus"), spaced out the main aisle of Exhibition Hall. These were specimens from the Cactus Canyon of Huntington Gardens, the most comprehensive out-of-door collection of the xerophytes of all arid lands.

A shipment of rare and exquisite cacti from Bolivia and Peru, collected by Curt Backeburg of Darmstadt, Germany, was on view, side by side with an equal number of choice specimens native to the State of Texas. "Neue Kakteen," the volume relating Curt Backeburg's experience in the Cordellrias of South America, and selling for the pleasant sum of 4 marks, (96 cents), aroused as much interest, as the new volume on Cactus by Ellen Schultz, a fellow of the Texas Academy of Science. Another fellow of the Texas Academy, Dr. Jacolyn Manning of Pasadena, won favorable comment and many ribbons by an exhibit of four color studies of the Mojave Desert, worked out with entire simplicity, and called respectively, "Dawn," "Noonday," "Sunset," and "Night on the Mojave Desert."

The great market demand for these unique children of the Americas was evidenced by the thousands of gem-like seedling cacti shown by commercial nurseries. W. H. Oliver (first prize) of Claremont, showed Mammillarias, coryphanthes, and Echinops, in bloom one and two years from seed. Mr. Oliver is a Canadian who purchased an orange grove, and in the center of that grove, at an elevation of about 1000 feet, established his glass and lath propagating houses.

The abundant reproductive power of a single cactus plant was demonstrated by a flat containing the parent, a small specimen of **Dolichothele sphaerica,** and its 88 children, grown from the seed contained in a single seed capsule which bloomed and ripened one year ago. This delicate native of the Rio Grande Valley would soon populate the steppes of Texas if the deterrents to its reproduction powers were once removed.

Dr. Lewellyn Lewis of Beverly Hills demonstrated that a garden of cacti and other succulents could be consistently planted about the Spanish-American home adjacent to lawns, without necessarily assuming a desert atmosphere. The effect of his extended mixed garden was very pleasing, if the element of time and amount of irrigation to be used and withheld, was not considered.

A gardener's flat containing 200 seedling **Euphorbia obesas,** in the collection of George Frick of Los Angeles, was doubtless the most valuable small exhibit. **E. obesa** (South Africa) commands a price of five dollars per inch in width, and these fat little beauties were just attaining one inch in growth.

That the writer spent four days and evenings inspecting and studying various collections of this altogether magnificent showing of cacti and other succulents, and did not once "get around," is evidence of the success of the society in its annual endeavor to assemble an adequate congress of the gorgeous and unique flora of arid lands.

MT. WOODSON GARDEN

California is continually offering surprises to those who wander in her out-of-doors. Tucked away in corners or hidden in small valleys are unexpected secrets which add to the allurements of our unique state. We, who are natives, should be accustomed to such a condition, yet we never are. This was so clearly realized not long ago, when the Floral Association members and their friends gathered at Mt. Woodson Farm, the mountain home of Mrs. Amy Strong.

Several miles off the main Ramona highway, completely hidden by embracing hills a bit of the Old World suddenly bursts into view. One visitor remarked, "The very giants, themselves, must have constructed this dwelling." And so it seems. Built block by block of the native field granite, designed and decorated in such beauty as only a master mind and hand could design and decorate, stands a manor house, a symbol of endurance, tempered by the harmony and understanding which are the products of inspiration.

The home and garden seem to entwine their arms and to belong one to the other. Every window looks out upon the ever peaceful mountains which stand guard over the more intimate gardens that Mrs. Strong has planted. Intimate, yes. Several pergola covered lath houses, a pool lazily smiling up at us from under a rustic bridge just built for meditation, winding paths hidden from sight by flowering shrubs, rare plants on the hospitable terrace and above it all the European windmill remind us that "A garden is a lovesome spot."

It is a pleasure to see natives and exotics rubbing cheeks and being happy together. Such large Raphiolepis, Leptospermum and Genista are seldom seen nearer the coast. The most outstanding shrub on the grounds is the Kolkwitzia amabalis, the Beauty Bush. A group of several planted together make a solid bank of feathery pinkness that is delightful. Noticeable are the fine plantings of Oregon grape, English holly, and High-bush cranberry. Back

of the house, Mrs. Strong has one of the largest single bushes of native slippery elm, Fremontia, that I have ever seen except in the mountains of the Sierra Madre Range. It is so tricky to grow here on the coast, that when we see a beautiful, shapely tree, a mass of showy, bronze-yellow blossoms, we fairly hold our breath. Near the Fremontia is a fine red bud, Cercis Californicis or occidentalis, also a native, which grows very abundantly along the Merced River gorge. Mrs. Strong has evidently pruned hers quite severely, but even so, it is twenty or more feet tall and a lovely thing, both when in full bloom, a glowing mass of waxy magenta red flowers crowded along its bare branches, and later when its fresh green leaves give it a crisp atmosphere.

The roadside slopes and pastures present patches of California poppies, lupines, buttercups, gilias and various native wildings. But what could be more satisfying than to see at a distance from the house, a softly rolling hillside clothed with native oaks, carpeted with wild flowers and sprinkled with picnic benches and tables, while through the air comes the aroma of coffee waiting in the picnic cabin?

Such was the memorable day so graciously extended us by Mrs. Amy Strong and her niece, Miss Meyers.

Alice Mary Greer.

AN APRIL AFTERNOON IN MRS. EVANS' GARDEN

"How beauteous is this garden: where the flowers of the earth vie with the stars of heaven."

This lovely Arabic inscription, written upon the walls of an old Alhambra garden, might suitably have been engraved upon the wall that Mrs. Herbert Evans has set between her garden and the street. Roses in the perfection of their bloom made a Paradise there far more wonderful than any ever found in old Alhambra gardens, for the gardenmakers of olden days knew naught of such varieties as adorn the gardens of today. Roses, as they grow in Mrs. Evans' garden, do their utmost to prove that perfection is possible if wise care, sacrifice and love are poured out in their service like some precious ointment. Setting a rose in the earth and giving it water is not enough, it seems, to inspire it to the utmost of its glory. There must be those unseen but potent stimulants of devotion and understanding care, care that hired service alone can never give.

Hudson says, "The sense of the beautiful is God's best gift to the human soul." Mrs. Evans' soul must have been very specially endowed, for she has vision, vision that always sets the way for the creation of beauty. She has done much in a practical way by showing what can be done with a San Diego canyon, with trees, vines and flowers inspiring many to a greater and more intelligent effort in their own plots of ground.

Everyone who loves a garden and their good angel, Miss Kate Sessions, was invited by Mrs. Evans to her garden April 15th to hear Miss Sessions talk, and to leave an offering of silver or paper at the arched gate as they went in. The fund thus collected is to go toward the creating of a cactus garden in Balboa Park as a living and lasting tribute to the lifetime of love and service Miss Sessions has poured out so lavishly since coming to San Diego. The making of this garden, that is possible no place in the world more completely than right here in Balboa Park, was an inspired idea. No more fitting acknowledgement to the gratitude San Diego gardenmakers feel they owe her, could be imagined. Miss Sessions is an authority on cactus and succulents and the finished garden will be unique and beautiful. This garden party in Mrs. Evans lovely canyon home was one of the happy methods of swelling the funds necessary to complete the memorial as it should be completed.

Chairs were placed on the lawn, beside the quiet pool, beneath the shady trees. Mrs. Evans received the guests, Miss Sessions beside her greeting old friends. Later tea was served on the terrace, reached beneath a bower of wisteria whose pendant blooms made a glory of the walk. It would be impossible to mention each and every delight of that afternoon, the talk, the roses, the view, the trees, the wisteria, the fern-fledged paths, perfumed air and charming color combinations. But it was graven deep on the heart and memory of the many people who talked with Mrs. Evans that afternoon and saw the living beauty she has caused to abide with her.

Eloise Roorbach.

WILD CHERRIES

The Carolina Cherry, Cerasus Caroliniana, discovered in 1759, on the Eastern Atlantic Coast, is comparable with our native California Cherry, Cerasus illicifolia or Prunus illicifolia. Our native species has the holly like foliage that gives the specific name, like the ilex or holly, and it is one of our best evergreen shrubs. To my great surprise this fall and even last year I noticed the brilliant green foliage of the Carolina Cherry even under very dry conditions, so it compares with our native Cherry regarding drought. It makes a more rapid growth and greater spread and I believe will flourish in colder locations than the native. The leaf is smooth and glossy, about two to three inches

long, and three-quarters to one inch wide. A hedge of it is growing on the west side of the Francis Parker School tennis court in San Diego. Plants growing at Santee in El Cajon Valley where the temperature has dropped to seven degrees Fahr., are particularly fine. Its berries are freely borne, small and black, in the east called the "bird cherry" and often remain upon the plants as late as December. Hardy plants, drought resistant evergreens, with handsome glossy foliage, are not abundant, and this variety is well worth more general cultivation. It grows shapely without any pruning but stands trimming when used for a hedge. That it does not make a tree but a good strong bush ten feet tall is to its advantage for a hedge plant.

The California Cherry is very useful for wreaths decorated with red berries for the holiday season and the Carolina Cherry would serve especially well for garlands, it being more easily handled.

K. O. Sessions.

FOUR OAK TREES

By Peter D. Barnhart

They are the inspiration of this article. Grand, gloriously beautiful specimens of the evergreen type, native of the coastal sections of California. Quercus is the Latin name for the tribe, to which belong about seventy species. Agrifolia is the specific name of the trees that arrested the attention of this writer, and were the cause of his enthusiasm to bubble up and flow over the edge of his cup of joy. Evidently the winged insect, the mother of the flat headed borer has not yet discovered these trees. Certainly not a dead branch marred the beauty of the pyramid of dark green, glazed foliage. Gentle rains had washed the leaves clean, and they showed their appreciation of the bath with a happy, cheerful appearance. Vegetation is supposed to be insensate. Perhaps that may be true, but the lover of plants, whose privilege it is to grow and care for them cannot, will not agree to the proposition. They respond to care, to loving kindness, and reward the gardener with luxuriant foliage, fine flowers, and delicious fruits. Nor does this end their mission in the scheme of things natural. No man, no woman who cares for trees and flowers escape their benificent influence, in both soul and body. This is not a theory, but a fact that has been demonstrated times without number. The question may arise in the mind of the reader "Where may these four paragons be seen?" The answer: Corona, Calif. While on the subject of Oaks, reference shall be made to an attempt made in the Botanic Garden of Mrs. Wernigk to grow the Golden Cup Oak, said to be the most beautiful species of the Tribe. Jepson says: "It has a wide distribution and grows under more varied conditions than any other species of this family in California." A little tree grown in a gallon can was planted May, 19730. Poor little tree. It was given the best of care and lived, only that and nothing more, through the year, and through the next year, and now, only now does it show a disposition to grow. Another attempt will be made with it, but with Acorns planted where the trees are to remain. Lester Rountree, of Carmel, Calif., will furnish the acorns. Anent growing Oak, and all other trees from seed where they are to remain, an article will be written by this writer, and will appear in another issue of this journal, giving his experience, and observation covering a period of a score of years.

A TRIP TO THE DESERT

By C. I. Jerabek

On Sunday, May 15, we started for the desert, leaving San Diego about 10 A. M. We arrived in Julian about noon, stopping for some gas and oil, then proceeded on our way, winding in and out among the sturdy oaks and pines.

Turning a curve to the right we left the wooded section and started down the Banner Grade. Here was only shrubby growth of a dozen or more varieties, a few of particular note were mountain mahogany (Cerocarpus parvifolius) with its small dark green crinkly leaves and queer twisting feathery seeds; the yellow tree poppy (Dendromecon rigida) with graceful willow-like foliage and masses of yellow flowers; intermingling with the shrubs and brightening the roadside were gorgeous Lupines varying in colors of blue, lilac or purple; Pentstemon centranthifolius (Scarlet Bugler); Pentstemon heterophyllus (Violet Beard Tongue) and occasionally a wallflower (Erysimum asperum) with its bright orange flowers.

Crossing a creek at the foot of the grade the vegetation changed. Several other kinds of trees were noticed, the most outstanding being the white alder (Alnus rhombifolia) which grew along the water course.

Gradually we left these behind and came into a region where the trees were of dwarf nature, Rhus ovata (Sugar Bush) with bright green glossy leaves and interesting flat and circular berries covered with a sticky crimson down; Juniperus California (California Juniper); harrea mexicana (Creosote Bush) which was covered with small yellow flowers and also some fuzzy white seedballs. Border-

ing the highway were beautiful white prickly poppies (Argemone platyceras) and Phacelia grandiflora with its saucer-shaped blue blossoms.

Leaving San Felipe Valley we entered Sentenac Canyon where a stream was cascading over the rocks forming many lovely water falls or pools, while along the edges were several kinds of water grass and large shrubs of Honey Mesquit (Prosopis juliflora) which were arrayed with golden tassels and bright green pinnate leaves. Driving along the north bank for some distance we crossed a bridge to the opposite side and going a short way turning and twisting around the many curves, when suddenly we came in sight of the first stretches of the desert, here the stream left us sinking out of sight in the sand.

In the traversing washes the desert willows (Chilopsis linearis) were struggling to keep their roots in the ground having been washed out by former rains, nevertheless they were covered with their bignonia-like flowers of a light lavender shade. Another curious tree had the appearance of smoke, (Dalea spinosa) an airy tangle of grayish twigs and branches. Sometimes we passed sand hummocks studded with Agave deserti, many were sending up their inflorescence like so many stalks of asparagus, while some showed their rich golden yellow flowers, others had matured. We tried to get some seeds but they had dropped in the sand or had been scattered by the four winds. Along the dry stream bed were clumps of that odd little Opuntia, called ramosissima. On these we saw many bronze colored flowers.

Ahead could be seen a cleft in the hills, as we came nearer a roadway was found through the dry stream bed amid the scattered rocks. After coming through this place which is called "The Narrows," the road forked; we took the one toward Borego driving a short distance, parked our car in the shade of an Ocotillo and proceeded to eat our lunch, though the desert was a blaze of sunshine, the heat was tempered by a slight breeze.

After resting a bit and wandering around examining the flora, we drove back to the main highway. At the intersection was a large shrub covered with yellow flowers (Acacia greggi) and flying around it a swarm of what we thought were bees but upon closer scrutiny proved to be tarantula hawks, the bee having no monopoly of this tree.

Going along this road from time to time we stopped and while Mrs. Jerabek stayed in the car, Mr. Cass and I wandered about the decomposed granite hummocks or sandy washes, taking pictures of some of the fine old patriarchs, Echino cactus cylindracrus (Barrel cactus and Opuntia bigelovi (Teddy Bear or Jumping Cholla). We found many large clumps of Opuntia basilaris (Beaver Tail); Opuntia parryi (California Cholla); Echinocereus engelmanni (Hedgehog Thistle) and several lone specimens of Phellosperms tetrancistra (Foxtail or Fish hook cactus). While scattered in every direction were large clumps of almost leafless stalks, like so many whisps stuck in the sand, on the tip of each brilliant scarlet flowers like spurts of flame, Fouguieria splendens (Ocotillo, Candlewood).

Mile upon miles of this desert is growing with these and other strange plants, its valleys and mountains so fascinating, so luring and inviting but yet so silest. Out here in this wasteland were several homesteader shacks, but then I do not think it makes any difference where we are located as long as we love our environment. As the old song goes, "Be it ever so humble there is no place like Home."

GLADIOLUS PEST IDENTIFIED AND CONTROLS DEVELOPED

The insect which last year severely injured gladiolus in many parts of the country has been identified by U. S. Department of Agriculture entomologists as a thrips — Taeniothrips gladioli M. & S. This tiny insect (1/25 to 1/16 inch in length) is black with cream-colored wing bases that give it a banded appearance. It attacks the gladiolus throughout the year, feeding on all parts above the ground in the growing season, going into storage with the corms, which it injures during the winter, and returning with the corms at planting time to continue the infestation.

The damage this thrips does is most evident in the flowers. The petals spreading out from the buds on which the insect has fed are streaked and bleached in spots. Thrips-infested gladiolus also have silvery, or bleached, patches on their leaves, brown, dead-looking stalks and leaf sheaths, and sometimes wartlike swellings on their stems.

This thrips, preliminary studies in the Bureau of Entomology show, can be controlled effectively by whichever of the following methods is most convenient for the grower: (1) Treating the corms with a mercuric chloride or organic mercurial dip; (2) fumigating the corms with a mixture of ethylene dichloride and carbon tetrachloride; or with calcium cyanide; (3) treating the corms with flake naphthalene; (4) treating the corms with heat (either hot water or vapor). The second method is most economical for commercial growers; the third is usually most convenient for amateurs and home gardeners.

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The Garden

By Walter Birch

Now that summer temperatures are approaching it is increasingly important to do everything possible to add to the moisture holding capacity of the soil, which in many San Diego gardens is so devoid of humus, that the soil simply acts as a sieve and the water disappears, without any benefit to plants or soil.

Of course, proper soil preparation for spring and summer growth should have been taken care of some months ago, but as many of us, perforce, have to do our gardening in a somewhat piecemeal and haphazard fashion, we can yet remedy the situation somewhat, even at this late date, by applying organic matter to the soil, such as peat humus or well rotted aged barn yard manure, distributed between the growing plants, and gradually worked into the surface of the soil in the usual process of taking care of the plants. In a short time you will notice the difference in the texture of the soil, the additional moisture it contains, the increased growth of your plants and the added pleasure you will get out of your general garden work.

It is about the last call for dahlia planting (this is the 10th inst.,) many of the early planted ones being now well advanced. A mulch around dahlias is a good idea, keeping ground from baking and taking care of the moisture. Don't forget to fertilize when the buds begin to form, and be sure to get the water down below the roots.

Continue setting out plants of Asters, Zinnias and African Marigolds, they will all give you a wonderful show of blooms until away late in the season, particularly the first two. Salpiglossis, either seeds or plants, will give you lots of flowers if planted now.

A very pretty combination of colors in petunias if planted close to each other is Silver Blue and Rosy Morn, and there is an unusually good supply this season of the Diener strain of giant semi-double and ruffled types of petunias, husky plants in 3-inch pots, that will go in the ground now and not even lose a bloom. They come in most attractive and varied colors, and are almost perpetual bloomers.

Agapanthus, or Blue African Lily is now coming into bloom, and can be planted in the container without setting it back, and replanted in the fall for bloom next summer. It is a tall beautiful gentian-blue flower with grassy leaves, requiring plenty of water and easy to grow.

Bachelor Buttons and Scabiosa plants both grow like weeds if given any care, and will give many attractive flowers if planted now. Give them plenty of room, particularly the former.

You are probably having trouble with mildew on your rose bushes at this time. Avoid wetting the foliage as much as possible in the evening and on cloudy days, and dust with fine dusting sulphur and arsenate of lead, nine parts of sulphur to one part of arsenate of lead. The arsenate of lead helps to control insects preying upon the roses. The blighted buds are largely the result of unfavorable weather conditions.

WELL PROTECTS TREE ROOTS IN SPITE OF SOIL COVERING

Recognizing that tree roots must breathe, Government tree specialists have provided extra breathing facilities for a few large trees temporarily remaining on the grounds of the Department of Agriculture in Washington, where soil is being filled in around them in regrading the grounds.

Although soil was filled in to a depth of several feet, the tree specialists left "windows" open for the trees. First they built a stone wall around the trunk of each tree, forming a well from the top of the fill to the former base of the tree. The trunk bark of a tree will not change to root bark, but with most kinds soon rots if in contact with the soil. The well prevents this, allowing air around the bark of the tree at all times. The wall is of loosely piled rock, allowing air to penetrate to the soil around the wall.

The tree roots, which in the growth of the tree have adjusted themselves to certain levels, will smother if a thick layer of dirt is placed on top of them. To prevent this the

tree men placed several layers of stone and gravel around the base of the tree, extending them out about 10 feet beyond the wall. At several points in this area drain tile are placed from the surface of the fill to the porous material beneath. Air then reaches the soil above the roots through this tile and the porous material, and also from the well.

Filling in around trees without some such precaution is likely to kill most kinds within three years, but with these precautions it is expected that the trees will continue to thrive for several years longer. Although such protection does not insure the continued health of the tree indefinitely, it usually keeps the tree alive until others may be grown to replace it.

FUCHSIAS

By Bertha M. Thomas

All lovers of our grandmother's favorites, her "Eardrops" as she called them, are now glorying in the beauty of their possessions. Our cold winter, combined with more than usual moisture, gave them a good growing condition, and they are now a beautiful display of all sizes and shapes, and shades of colors running through pinks, blues, reds and orange.

Mme. Eva Boeg, violet and rose with green tipped sepals gives a picture of clear distinct coloring. Karl Blanc (Black Prince) is a mass of two shades of pink. Minnesota is another of the clean cut in coloring, heavy white tube and sepals, carmine petals. Sensation has long thin blossoms, with purple corolla shaded mauve at base.

Swanley Yellow, extra long tube and sepals flushed pink and orange, deep orange corolla. New Swanley is smaller blooms, same sepals, and corolla is shaded mauve. Ballet Girl is large spreading bloom, red sepals, blue corolla changing to red.

Lycioides grows tall and shrub-like, very small rosy mauve flowers. The Corymbiflora, both the white and red varieties will grow 10 to 12 feet high, with very large hanging clusters of their red and pinkish-white blossoms, very long tubes and very small corolla.

Arborescence (Syringaefolia) resembles a lilac in shape of bloom, also in color and is also large in growth. Coreifolia is another bush type, with shades of yellowish-red and deep pink long blossoms. Thymifolia is the tiniest bloom, all crimson, but grows quite bushy.

Exeter is a striking beauty—healthy growth, blooms extra large, sepals deep rose, corolla is mauve shaded. Irwin's Giant is soft rose, double corolla streaked and flushed deeper rose and deep pink sepals. Le Robusta has handsome light green leaves, immense violet blue corolla with rose veinings but it is not strong sturdy growth—rather likes to droop.

Diamant is an old standard double, loose, white petals, streaked carmine; a strong grower but plants get very ill shaped when any age. Gen. Roberts (Phenomenal) large bushy growth, immense plum color corolla, carmine at base. Gloire De Marchii resembles Diamant but corolla nearly white. Some Catalogues say foliage is crinkled but with us it is smooth.

Avalanche has yellowish leaves, large purple corolla, and is quite distinct. Wave of Life has golden foliage, but seems to be frail. We have had two plants which died in comparative infancy. Minos is small in growth and flower, and of very common colors. Ernest Renain is another of those clear cut coloring, large pure waxy tube, rich rosy corolla, and good growth.

Gracillis is the common miniature Fuchsia which grows into large bushes, and I am told by travellers that it is used as a hedge in its native habitat. Its companion, Gracillis Variegata, has beautiful leaves, a glowing red in the young growth in early spring, but later

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turns to grey green with lighter spots.

Some of the new English importations are such beauties that we have almost forgotten the many which refused to abide with us even after we made two attempts to give them a home. Rose of Denmark is a handsome rose pink and decidedly new. Marvel is a dainty little bushy plant and really a marvel for bloom, but of common colors. Rolla is very distinct, very short double white corolla, with beautiful light pink sepals, and a plant of good growth.

Duchess of Albany is a single bloom but a novel rose red corolla and clear white sepals. Rose of Denmark is one of the most beautiful I have ever seen, a sturdy little plant with light pink sepals and corolla.

Countess of Aberdeen has very small pale pink blossoms, bushy habit, but is a novelty. Starlight is another English importation which is a clear white and rose pink, dainty but that is about all the praise one can give.

Souvenir Henry Henkel is the Triphylla type of which we have several varieties, the flowers long tubes, very small corolla and colors running through shades of orange, vermillion and red. Leaves are bronze red with velvet sheen and this type will stand some sun without protesting as most Fuchsias do. Mary and Coralle are two varieties of this type which have dark blue-green leaves with the velvet sheen. In both plants the leaves are very similar except that Mary has red rib center and veining while Coralle is all green. Thalia has bronze green foliage and same velvet sheen.

We will give more names and short description of other Fuchsias at a later date. But remember our hot dry weather is a special foe of Fuchsias, so give them water, mulching and a little fertilizer once in two weeks. Spray for red spider and thrip with Volck; and also remember they grow much best in a very acid soil. If you care to cater to their appetite, they will show quick appreciation. In fact I know of no class of plants which respond more quickly and effectively to right treatment. But they are very fussy about living if the soil is loosened from their roots in replanting. A loose friable soil is one of their necessities but the root system is always shallow, hence no cultivating near the plant is required. If you will also spray the foliage every night during the hot weather, it will aid them to breathe. And above all else, always give North planting; or East as a second choice.

NOVELTIES

Novel or unusual plants growing in Golden Gate Park, San Francisco, whose merit makes them deserving of the attention of all garden-lovers.

Eric Walther.

(*—Especially noteworthy)

*Abelia floribunda
" schumannii
" uniflora
*Abutilon vitifolium
Acacia hastulata
" pubescens
" riceana
*Aconium nobile
*Banksia grandis
" speciosa
Barosma ovata
Berberidopsis corallina
Berberis chitria
*Bomarea sp.
Buddleia colvillei
* " salvifolia
Calceolaria violacea
*Camellia reticulata
Ceratostigma willmottianum
Chamaelaucium uncinatum
Chironia linoides
Chorizema cordatum
Chrysocoma coma-aurea
Cistus loretii var. maculatus
* " purpureus
*Clethra arborea
*Coleonema pulchrum
Convolvulus cneorum
Coronilla juncea
*Cotoneaster bullata
" dielsiana var. elegans
*Crotalaria agatiflora
Cupressus cashmeriana
*Cytisus dallimorei
" nigricans
*Deutzia pulchra
Diostea juncea
Dipelta floribunda
" ventricosa
Dryandra floribunda
" formosa
Echium pininana
Embothrium coccineum
Erica chamissonis
Eriostemon myoporeides
*Escallonia donardensis
* " edinensis
Eucalyptus caesia
" erythrocorys
" macrocarpa
" pyriformis
" torquata
*Eucryphia cordifolia
*Eugenia smithii

Patronize the Garden Advertisers.

Eutaxia diffusa
Fuchsia cordifolia
" pumila
* " reflexa
* " rosea
" splendens
Garrya macrophylla
" thuretii
*Gazania longiscapa
Grevillea leucopteris
" punicea
" rosmarinifolia
" trifurcata
Hakea multilineata
Halimium fermosum
" umbellatum
Heterocentron roseum
Hippophac hybrida
Hovea elliptica
Ilex pernyi
Itea ilicifolia
Jasminum stephanense
Juniperus excelsa
Knightsia excelsa
Kolkwitzia amabilis
*Kunzea peduncularis
Lambertia multiflora
*Lavatera olbia
*Leptoseprmum scoparium var. rubio-pygmasum
*Leschenaultia biloba
Lonicera tragophylla
*Luculia intermedia
*Magnolia campbellii
Mesembryanthemum blandum var. curviflorum
" croceum
* " spectabile
Mitraria coccinea
Myrsins africana
Myrtus bullata
Osmanthus armatus
Oxylobium callistachys
*Parrotiopsis jaquemontiana
Pentapterygium serpens
Phillyrea decora
Podalyrea calyptrata
" sericea
Pomaderris elliptica
*Protea compacta
* " susannae
Prunus campanulata
*Psorales aphylla
*Puya alpestris
Rhamnus alaternus
Salix magnifica
Solanum crispum
" gayanum
*Stenocarpus sinuatus
*Telopea speciosissima
* " truncata
*Tricuspidaria lanceolata
Veronica bellonsii
Viburnum cinnamomifolium
" cylindricum
* " fragrans
" sieboldii
Viminaria denudata
Virgilia capensis

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of California Garden, published monthly at Point Loma, California, April, 1932.

State of California, County of San Diego, ss.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared John Bakkers, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the California Garden, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, San Diego Floral Association, Point Loma, Calif.

Editor, S. B. Osborn, Box 323, San Diego, Cal.

Business Manager, John Bakkers, P. O. Box 323, San Diego, Cal.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) San Diego Floral Association, Point Loma, Cal., Pres. M. A. Greer, 2972 First Avenue, San Diego, Cal.; Sec. Mrs. De Forrest Ward, 1803 Montecito Way, San Diego, Cal. There is no capital stock.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holders appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has not reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is. (This information is required from daily publications only.)

S. B. OSBORN.

Sworn to and subscribed before me this 12th day of April, 1932.

CECIL W. BALL,
My commission expires Aug. 9, 1935,

Patronize the Garden Advertisers.

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